

AMENDMENTS TO THE DRAWINGS

The attached replacement sheet of drawings, including Figure 3, replaces the previously submitted sheet of drawings including Figure 3. More specifically, Applicant has amended Figure 3. The replacement sheet has been clearly labeled "Replacement Sheet" in the page header.

Attachment: 1 Replacement Sheet of drawings including Figure 3

REMARKS

Claims 1 and 3-8 are pending in the application. Claims 1, 3, and 7 have been amended. Claim 2 has been cancelled. Claim 8 has been added. Claims 1 and 8 are in independent form.

Drawings

1. The Examiner has objected to the drawings under 37 C.F.R. §1.84(p)(4) because "reference character '104' has been used to designate both pull down for turning switch 98 off and a resistor connected to battery 28 and capacitor 68." In response, Applicant has attached 1 replacement sheet of drawings, including Figure 3, hereto directly following these Remarks. Each replacement sheet has been labeled as "Replacement Sheet" in the page header as per 37 C.F.R. §1.121(d).

In amended Figure 3, Applicant has deleted current reference character "106" and changed one occurrence of reference character "104" to -- 106 -- to identify a supervision channel 106 as set forth in the paragraph beginning at page 6, line 4 (paragraph [0022] of the published application). Applicant respectfully requests that the objection to the drawings be withdrawn.

Specification

2. The specification has been amended to add a reference to related applications, as suggested by the Examiner. Applicant respectfully requests that the objection to the specification be withdrawn.

Claim Rejections

3-7. Claim 1 stands rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,883,839 to Belmond et al. Claims 2-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the '839 reference in view of U.S. Patent 6,056,076 to Bartel et al. Applicant respectfully traverses the rejections.

Applicant has amended claim 1 to overcome Belmond. Further, Applicant has amended claim to overcome the combination of Belmond and Bartel. Claim 1, as amended, claims a latching assembly including a ratchet selectively rotatable with a striker to latch and unlatch a door; a pawl selectively engagable with the ratchet to selectively prevent the ratchet from rotating; a motor electrically connected to a main electric power supply and operatively connected to the pawl for pivoting the pawl into and out of engagement with the ratchet; a backup battery disposed adjacent the motor for supplying electric power when the motor is disconnected from the main electric power supply; a battery charger electrically connected to the main electric power supply and the backup battery, the battery charger adapted for charging the backup battery; a capacitive element storing a charge for immediate discharge to the motor when the motor is disconnected from the main electric power supply; a diagnostics module electrically connected to the capacitive element, the diagnostics module monitoring a leakage current of the capacitive element; and a microcontroller electrically connected to the backup battery, the battery charger, and the diagnostics module, the microcontroller monitoring a voltage of the backup battery and controlling the battery charger in response to detecting a low voltage of the backup battery, the microcontroller monitoring the recharging of the backup battery to determine whether the backup battery is worn, the microcontroller receiving signals from the diagnostics module related to the leakage current to determine a failure of the capacitive element, and the microcontroller monitoring the discharge of the capacitive element when the motor is disconnected from the main electric power supply to determine the health of the capacitive element.

First, neither of the cited references disclose a battery charger for charging a backup battery, as specifically required by amended claim 1. Belmond discloses providing a back-up battery. Belmond does not, however, disclose a battery charger for charging the back-up battery. Bartel discloses an emergency battery (11). Bartel does not, however, disclose a battery charger for charging the emergency battery (11).

Second, neither of the cited references disclose a diagnostics module electrically connected to a capacitive element for monitoring a leakage current of the capacitive element, as specifically required by amended claim 1. As the Examiner states, "Belmond ... does not

disclose a capacitive element for storing a charge for immediate discharge when said motor is disconnected from the main electric supply.” Therefore, Belmond clearly does not disclose a diagnostics module electrically connected to a capacitive element. Bartel discloses a capacitor (19) that can be charged from the generator or alternator of the vehicle directly or indirectly from the starter battery (10) or the emergency battery (11) via lines (30) through a controller (21) which can have a so-called electronic charge manage (22) which maintains the charge in the capacitor (19). Bartel does not, however, disclose a diagnostics module that is electrically connected to the capacitor (19) and monitors a leakage current of the capacitor (19). Further, Bartel does not provide any disclosure of diagnostics by monitoring a leakage current of the capacitor (19). In the present application, the leakage current of the capacitive element is monitored to determine a capacitor failure.

Third, neither of the cited references disclose a microcontroller that is electrically connected to a backup battery and a battery charger, and that monitors the voltage of the backup battery, and that controls the battery charger to charge the backup battery in response to detecting a low voltage of the backup battery, as specifically required by amended claim 1. As noted above, Belmond does not disclose a battery charger for charging the back-up battery. Therefore, Belmond clearly does not disclose a microcontroller electrically connected to a battery charger. Bartel discloses that the controller (21) maintains the charge in the capacitor (19). Bartel also discloses a control unit (2) that monitors the voltage of the starter battery (10). Bartel does not, however, disclose that the controller (21) or the control unit (2) monitors the voltage of the emergency battery (11) or controls a battery charger to charge the emergency battery (11).

Fourth, neither of the cited references disclose a microcontroller that is electrically connected to a backup battery and monitors the recharging of the backup battery to determine whether the backup battery is worn, as specifically required by amended claim 1. As noted above, Belmond does not disclose a battery charger for charging the back-up battery. Therefore, Belmond clearly does not disclose a microcontroller electrically connected to a battery charger. Bartel discloses that the controller (21) maintains the charge in the capacitor (19). Bartel also discloses that the control unit (2) monitors the voltage of the starter battery (10). Bartel does not, however, disclose that the controller (21) or the control unit (2) monitors the emergency battery

(11) to determine whether it is worn. In the present application, the recharging of the backup battery is monitored to determine whether the backup battery is worn.

Fifth, neither of the cited references disclose a microcontroller that is electrically connected to a diagnostics module and receives signals from the diagnostics module related to a leakage current of a capacitive element, as specifically required by amended claim 1. As the Examiner states, "Belmond ... does not disclose a capacitive element for storing a charge for immediate discharge when said motor is disconnected from the main electric supply." Therefore, Belmond clearly does not disclose a microcontroller that is electrically connected to a diagnostics module for receiving signals related to a leakage current of a capacitive element. Bartel discloses that the controller (21) maintains the charge in the capacitor (19). Bartel does not, however, disclose that the controller (21) receives signals from a diagnostics module to monitor a leakage current of the capacitor (19). Further, Bartel does not provide any disclosure of diagnostics by monitoring a leakage current of the capacitor (19).

Finally, neither of the cited references disclose a microcontroller that is electrically connected to a diagnostics module and monitors the discharge of a capacitive element, as specifically required by amended claim 1. As the Examiner states, "Belmond ... does not disclose a capacitive element for storing a charge for immediate discharge when said motor is disconnected from the main electric supply." Therefore, Belmond clearly does not disclose a microcontroller that is electrically connected to a diagnostics module for monitoring the discharge of a capacitive element. Bartel discloses that the controller (21) maintains the charge in the capacitor (19). Bartel does not, however, disclose that the controller (21) monitors the discharge of the capacitor (19). In the present application, the discharge of the capacitive element is monitored and compared with an expected profile, stored in the microcontroller, to determine the health of the capacitors.

As such, neither Belmond nor Bartel disclose each and every limitation of amended claim 1. Further, neither of the cited references, alone or in combination, teach or suggest each of the limitations of amended claim 1. Thus, amended claim 1 is allowable.

Applicant has cancelled claim 2.

Claims 3-7 depend from amended claim 1 and, as such, are construed to incorporate by reference all of the limitations of the claim to which they refer, *see* 35 U.S.C. §112, fourth paragraph. Since amended claim 1 is allowable as set forth above, claims 3-7 are also allowable.

Therefore, Applicant respectfully requests that the rejections of claims 1-7 be withdrawn.

New Claim

Applicant has added new independent claim 8, which claims a latching assembly including a ratchet selectively rotatable with a striker to latch and unlatch a door; a pawl selectively engagable with the ratchet to selectively prevent the ratchet from rotating; a motor electrically connected to a main electric power supply and operatively connected to the pawl for pivoting the pawl into and out of engagement with the ratchet; a backup battery disposed adjacent the motor for supplying electric power when the motor is disconnected from the main electric power supply; a battery charger electrically connected to the main electric power supply and the backup battery, the battery charger adapted for charging the backup battery; a capacitive element storing a charge for immediate discharge to the motor when the motor is disconnected from the main electric power supply; a diagnostics module electrically connected to the capacitive element, the diagnostics module monitoring a leakage current of the capacitive element; and a microcontroller electrically connected to the diagnostics module, the microcontroller receiving signals from the diagnostics module related to the leakage current to determine a failure of the capacitive element, and the microcontroller monitoring the discharge of the capacitive element when the motor is disconnected from the main electric power supply to determine the health of the capacitive element.

First, as stated above with respect to claim 1, neither of the cited references disclose a battery charger for charging a backup battery, as specifically required by claim 8. Belmond discloses providing a back-up battery. Belmond does not, however, disclose a battery charger for charging the back-up battery. Bartel discloses an emergency battery (11). Bartel does not, however, disclose a battery charger for charging the emergency battery (11).

Second, neither of the cited references disclose a diagnostics module electrically connected to a capacitive element for monitoring a leakage current of the capacitive element, as specifically required by claim 8. As the Examiner states, "Belmond ... does not disclose a capacitive element for storing a charge for immediate discharge when said motor is disconnected from the main electric supply." Therefore, Belmond clearly does not disclose a diagnostics module electrically connected to a capacitive element. Bartel discloses a capacitor (19) that can be charged from the generator or alternator of the vehicle directly or indirectly from the starter battery (10) or the emergency battery (11) via lines (30) through a controller (21) which can have a so-called electronic charge manage (22) which maintains the charge in the capacitor (19). Bartel does not, however, disclose a diagnostics module that is electrically connected to the capacitor (19) and monitors a leakage current of the capacitor (19). Further, Bartel does not provide any disclosure of diagnostics by monitoring a leakage current of the capacitor (19). In the present application, the leakage current of the capacitive element is monitored to determine a capacitor failure.

Third, neither of the cited references disclose a microcontroller that is electrically connected to a diagnostics module and receives signals from the diagnostics module related to a leakage current of a capacitive element, as specifically required by claim 8. As the Examiner states, "Belmond ... does not disclose a capacitive element for storing a charge for immediate discharge when said motor is disconnected from the main electric supply." Therefore, Belmond clearly does not disclose a microcontroller that is electrically connected to a diagnostics module for receiving signals related to a leakage current of a capacitive element. Bartel discloses that the controller (21) maintains the charge in the capacitor (19). Bartel does not, however, disclose that the controller (21) receives signals from a diagnostics module to monitor a leakage current of the capacitor (19). Further, Bartel does not provide any disclosure of diagnostics by monitoring a leakage current of the capacitor (19).

Finally, neither of the cited references disclose a microcontroller that is electrically connected to a diagnostics module and monitors the discharge of a capacitive element, as specifically required by claim 8. As the Examiner states, "Belmond ... does not disclose a capacitive element for storing a charge for immediate discharge when said motor is disconnected


from the main electric supply.” Therefore, Belmond clearly does not disclose a microcontroller that is electrically connected to a diagnostics module for monitoring the discharge of a capacitive element. Bartel discloses that the controller (21) maintains the charge in the capacitor (19). Bartel does not, however, disclose that the controller (21) monitors the discharge of the capacitor (19). In the present application, the discharge of the capacitive element is monitored and compared with an expected profile, stored in the microcontroller, to determine the health of the capacitors.

As such, neither Belmond nor Bartel disclose each and every limitation of claim 8. Further, neither of the cited references, alone or in combination, teach or suggest each of the limitations of claim 8. Thus, claim 8 is allowable.

It is respectfully submitted that this patent application is in condition for allowance, which allowance is respectfully solicited. If the Examiner has any questions regarding this amendment or the patent application, the Examiner is invited to contact the undersigned.

The Commissioner is hereby authorized to charge any additional fee associated with this Communication to Deposit Account No. 50-1759. A duplicate of this form is attached.

Respectfully submitted,



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